## REMARKS

Claims 1-66 were examined. Claims 1-19, 34 and 52-66 are amended. No claims are canceled. Claims 1-66 remain in the application. Reconsideration of the pending claims is respectfully requested in view of the above amendments and the following remarks.

### I.    Claims Rejected Under 35 U.S.C. § 101

Claims 1-66 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1-16, these claims are amended to recite "a computer implemented method including creating a data structure for storing data object." Therefore, the claims produce a tangible result because a specific kind of data structure is being created by the computer implemented method. Accordingly, reconsideration and withdrawal of rejections of claims 1-16 under 35 U.S.C. § 101 are respectfully requested.

With respect to claims 17 and 18, these claims are amended to include the limitation of "machine readable tangible storage medium." Therefore, claims 17 and 18 produce tangible result because the data structure is stored on a computer readable medium. Accordingly, reconsideration and withdrawal of rejections of claims 17 and 18 under 35 U.S.C. § 101 are respectfully requested.

With respect to claim 19, the claim recites "a method comprising storing in a memory a root note, ...., storing in the memory a pointer." Therefore, claim 19 produces tangible result because the root note and the pointer are being stored in the memory, which is a computer-readable medium. Dependent claims 20-33 depend from claim 19 and therefore incorporate this limitation. Accordingly, reconsideration and withdrawal of rejections of claims 19-33 under 35 U.S.C. § 101 are respectfully requested.

With respect to claim 34, the claim recites "a memory having a data structure stored therein." Similarly, this claim produces a tangible result because "a memory" is a computer-readable medium which stores a data structure. Dependent claims 35-51 depend from claim 34 and therefore incorporate this limitation. Accordingly, reconsideration and withdrawal of rejections of claims 34-51 under 35 U.S.C. § 101 are respectfully requested.

With respect to claim 52, similar to the discussion with respect to claims 19 and 34, claim 52 recites "store in a memory a root note ... store in the memory a pointer." Therefore claim 52

produces tangible result because the root note and the pointer are being stored in the memory, which is a computer-readable medium. Dependent claims 53-66 depend from claim 52 and therefore incorporate this limitation. Accordingly, reconsideration and withdrawal of rejections of claims 52-66 under 35 U.S.C. § 101 are respectfully requested.

## II.   Claims Rejected Under 35 U.S.C. § 102

Claims 1-9, 13-14, 16-27, 31-42, 46-60 and 64-66 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,752,243 to Reiter et al. (*"Reiter"*). To anticipate a claim, the Examiner must show that a single reference teaches each of the elements of that claim.

Independent claims 1, 19, 34, and 52, as amended, recite "a root node, the root node including a number of sequential keys, each key including a first value and a second value, the first and second values of each key defining a range for that key, wherein the ranges of the number of key are non-overlapping, the ranges between each key are capable of having gaps." *Reiter* does not teach or suggest this limitation.

Rather, *Reiter* discloses a computer method and storage structure for storing and accessing multidimensional data with a tree manager provided to store data such as pointers. (Abstract). A root node 112 contains key values "B" and "P" in its key value table and node identifiers for the child nodes 114, 116, and 118 in its subnode table. (col. 7, lines 35-38). A child node 114 is followed when the key value being sought is less than or equal to "B" and a child node 116 is followed when the key value being sought is greater than "B" but less than or equal to "P". Pointer 117 points to child node 118 is followed when the key value being sought is greater than "P". (col. 7, lines 38-50).

The "B" and "P" key values disclosed in *Reiter* act as a divider that divides the child nodes based on these key values. However, *Reiter* does not disclose that its key values are capable of having gaps. For instance, *Reiter* does not disclose the capability that in a situation where no child node is followed if the key values are between "H" and "K" and therefore, the data structure in *Reiter* is not capable for having gaps.

Applicants also submit that the amended claim language is fully supported by the specification as filed in paragraph [0052] where it states the keys that represent ranges may be stored sequentially but have gaps between them.

Because *Reiter* does not disclose this limitation, *Reiter* does not teach or suggest the limitations of claims 1, 19, 34, and 52.

Dependent claims 2-9, 13-14, 16-18, 20-27, 31-33, 34-42, 46-51, 53-60 and 64-66 depend from claims 1, 19, 34, and 52 and therefore incorporate the limitations of these claims. For at least the reasons stated above, these claims are not anticipated by *Reiter*. Accordingly, reconsideration and withdrawal of rejections of claims 1-9, 13-14, 16-27, 31-42, 46-60 and 64-66 under 35 U.S.C. § 102 are respectfully requested.

## III.  Claims Rejected Under 35 U.S.C. § 103

Claims 10, 15, 28, 43 and 61 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Reiter*, as applied to claims 1 and 9 above respectively, in view of U.S. Patent No. 6,161,144 to Michels et al. (*"Michels"*).   To establish a *prima facie* case of obviousness, the Examiner must show the cited references, combined, teach or suggest each of the elements of a claim.

Claims 10, 15, 28, 43 and 61 depend from independent claims 1, 19, 34, and 52 and therefore incorporate all the limitations of these independent claims. For at least the reasons stated above, *Reiter* does not teach or suggest the limitations of claims 10, 15, 28, 43 and 61. *Michels* does not cure this deficiency.

Rather, *Michels* discloses a lookup table for the switching device to determine which port to forward network traffic. The lookup table includes network addresses that are maintained in ascending or descending order. (Abstract) Fig. 4A in *Michels* shows an example of a lookup table 100 having 16 data entries. Each table entry includes two or more fields including, an address field 102, and a forwarding information field. (Fig. 4A; col. 7, lines 35-39). However, the address field contains network addresses and the forwarding information contains port numbers. These addresses and port numbers are not used as the keys in the same way the keys are used as recited in claims 1, 19, 34, and 52. At the very least, no range is defined for these addresses or port numbers. Since no range is taught or suggested in *Michels*, *Michels* does not teach or suggest that "the ranges between each key are capable of having gaps" as recited in claims 1, 19, 34, and 52. Therefore, the combination of *Reiter* and *Michels* does not teach or suggest the limitations of claims 1, 19, 34, and 52. Because dependent claims 10, 15, 28, 43 and 61 depend from claims 1, 19, 34, and 52, claims 10, 15, 28, 43 and 61 are patentable over the combination of *Reiter* and *Michels*.

Accordingly, reconsideration and withdrawal of rejections of claims 10, 15, 28, 43 and 61 under 35 U.S.C. § 103 are respectfully requested.

Claims 11-12, 29-30, 44-45 and 62-63 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Reiter*, as applied to claim 1 above, in view of U.S. Patent No. 3,725,875 to Choate et al. (*"Choate"*).

Claims 11-12, 29-30, 44-45 and 62-63 depend from independent claims 1, 19, 34, and 52 and therefore incorporate all the limitations of these independent claims. For at least the reasons stated above, *Reiter* does not teach or suggest the limitations of claims 11-12, 29-30, 44-45 and 62-63. *Choate* does not cure this deficiency.

Rather, *Choate* discloses a trainable signal processor having at least one input signal u and one desired output signal z application thereto during training and having at least one actual output signal derived therefrom during execution is provided. From each member of the input sequence $u(t_i)$ a key $K_i$ is generated. $K_i$ may have a finite number of values. Each $K_i$ generated during traning, a trained response is derived from samples of the desired output signal z measured. The trained response is maintained in a tree allocated file. The file thereby associates with each key $K_i$ a trained response. Storage is provided for only those $K_i$ which actually occurred during training. (Abstract).

Applicants respectfully submit that *Choate* does not disclose the keys having a range and the ranges are capable of having gaps. Each key generated in *Choate* is used to identify and represent each input signal in digital form. (col. 3, lines 7-8). Because *Choate* does not teach or suggest that the keys having a range and the ranges are capable of having gaps, *Choate* does not cure the deficiency of *Reiter*. Thus, claims 11-12, 29-30, 44-45 and 62-63 are patentable over the combination of *Choate* and *Reiter*.

Accordingly, reconsideration and withdrawal of rejections of claims 11-12, 29-30, 44-45 and 62-63 under 35 U.S.C. § 103 are respectfully requested.

# CONCLUSION

In view of the forgoing, it is believed that all claims now pending, namely claims 1-66 are in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional frees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date:   May 23, 2006

Christine S. Chang, Reg. No. 55,050

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
Telephone (310) 207-3800
Facsimile (310) 820-5988